

H. S. John.

Rhodora

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PLANTS GROWING THE FIRST SEASON IN AN UNCOVERED CELLAR.¹

JOHN ROBINSON.

THE South Church, at the corner of Chestnut and Cambridge streets in Salem, Mass., was burned on the evening of December 19, 1903. The entire upper portion of the building was destroyed but the main floor was not burnt through to any extent, so that, neither in the church itself, nor in the vestry immediately at the north of the church, which was also burnt, did fire extend into the cellars. Both cellars had ordinary earth floors. The church cellar was seventy-five by sixty-five feet; the vestry was fifty-three by forty feet. The two cellars were separated by a space—never dug out—fourteen feet in width, over which a wooden connection from the church to the vestry was built a number of years ago. The church was erected in 1804, no external changes of any importance having been made in it afterward. An old vestry was replaced by a new one some fifty years since, practically upon the old cellar. Thus, neither cellar had ever been open to the light and air since the first construction of the buildings and there had never been any vegetation in either of them. After the fire, the remains of the church and vestry and all of the rubbish were

¹[In publishing this posthumous paper of Mr. John Robinson, RHODORA acknowledges indebtedness both to Prof. A. P. Morse who, in preparing a bibliography of Mr. Robinson's writings, came upon the manuscript and brought it to our attention, and to the Librarian of the Essex Institute at Salem, Massachusetts, for permission to print the paper, which was deposited in that establishment by Mr. Robinson Jan. 27, 1908. It has seemed best to leave the flora in its original form rather than to make any attempt to modernize its arrangement or nomenclature. Mr. Robinson's observations, of a kind rarely recorded in such detail, show clearly the rapidity with which exposed terrain is invaded by adjacent vegetation.—Ed.]

cleared away, but not until late in the spring of 1904 was either cellar bottom fully exposed to the sun.

These cellars were quite carefully examined on October 14 and 17, 1904, when the plants given in the following list were collected. The list is interesting as showing what a large number of species had appeared in so short a time—five months—in a place where no plants had ever grown before, and also, as showing how quickly certain plants will attain perfection from the seed and to what extent other seedlings will develop in one short season. At the time the collection was made the entire cellar of the vestry was well covered with vegetation, the larger cellar of the church was not so fully covered. No plants were recorded except those from the old cellar bottoms; the covered space between the cellars was disregarded.

As to the source of the seeds: The church was in the center of the residential portion of the city with yards and gardens in the immediate neighborhood from which the wind and birds undoubtedly carried seeds, and fruit of one sort and another was probably thrown into the cellars by persons passing on the streets during the summer. It is quite probable that rubbish had been put in the cellars at various times, including faded flowers from the church decorations. There are few plants in the list which may not be accounted for by one of these suppositions.

In preparing the list there seemed to be no reason for separating the plants found in one cellar from those in the other as the conditions were practically the same in each case. The nomenclature follows that of Britton and Brown's *Flora of the Northern States and Canada*.

PEABODY MUSEUM,

Salem, Mass., Oct. 1, 1908.

T/
LIST OF PLANTS COLLECTED IN THE CELLARS OF THE SOUTH CHURCH
AND VESTRY, OCTOBER 14 AND 17, 1904.

RANUNCULACEAE

Delphinium (species). Garden Larkspur. Plant 4 inches high.

CRUCIFERAE

Bursa bursa-pastoris. Shepherd's Purse. Flowering plants.

CARYOPHYLLACEAE

Alsine media. Chickweed. Flowering plants.

Cerastium viscosum. Mouse-ear Chickweed. Flowering plants.

PORTULACACEAE

Portulaca oleracea. Purslane. Flowering plants.

MALVACEAE

Malva rotundifolia. Common mallow: Cheeses. Flowering plants.

GERANIACEAE

Geranium robertianum. Herb Robert. Small plants.

Oxalis stricta. Yellow Wood-Sorrel. Flowering plants.

ANACARDIACEAE

Rhus hirta. Staghorn Sumac. Plant 1 foot high. Fruiting tree in near-by garden.

VITACEAE

Vitis (species). Native Grape. Plant 6 inches high.

Vitis (species). Foreign Grape. Plant 4 inches high.

RHAMNACEAE

Rhamnus cathartica. Buckthorn. Plant 4 inches high. Fruiting tree in adjoining estate.

SAPINDACEAE

Acer rubrum. Red Maple. Plants 3 inches high. Fruiting trees in streets near the church.

LEGUMINOSAE

Trifolium pratense. Red Clover. Flowering plants.

Trifolium repens. White Clover. Flowering plants.

Trifolium hybridum. Alsike. Flowering plants.

Medicago lupulina. Black Medick. Flowering plants.

ROSACEAE

Spiraea vanhoutii. A garden Spiraea. Plants 4 inches high. Grown in gardens about the church.

Fragaria (species). Strawberry. Small plant.

Rubus odoratus. Purple Flowering Raspberry. Plant 4 inches high. Grows in adjoining gardens.

Rubus idaeus. Garden Raspberry. Plants 6 inches high. Grows in neighboring gardens.

Rubus strigosus. Blackberry. Plant 1 foot high.

Pirus malus. Apple. Plant 8 inches high.

Pirus aucuparia. Mountain Ash. Small seedling, growing to quite large size the next year. Trees near by.

UMBELLIFERAE

Conium maculatum. Poison Hemlock. Many plants in full flower 2 feet high. Never noticed in the neighborhood.

COMPOSITAE

Aster tradescanti. White Aster. Flowering plants 14 inches high. Probably from church floral decorations.

Leptilon canadensis. Horse-weed. Flowering plants 4 feet high.

Erigeron ramosus. Daisy Fleabane. Flowering plants 2 feet high. Grows in gardens in the neighborhood.

Solidago canadensis. Golden-rod. Flowering plants 3 feet high. In neighboring gardens.

Euthamia graminifolia (*Solidago lanceolata*). Bushy Golden-rod. Small plants, flowering the next year. Not noticed in the neighborhood.

Ambrosia artemisiaefolia. Roman Wormwood. Flowering plants 14 inches high.

Bidens frondosa. Beggar-ticks. Flowering plants. A common weed in near-by gardens.

Chrysanthemum leucanthemum. Whiteweed. Large plants. Often used in church decorations.

Erechtites hieracifolia. Fireweed. Flowering plant 3½ feet high.

Senecio vulgaris. Groundsel. Flowering plants.

Arctium lappa. Burdock. Plants 4 feet in diameter, not flowering.

Taraxacum taraxacum. Dandelion. Many large plants in flower.

LABIATAE

Galeopsis tetrahit. Hemp Nettle. Seedling plants 8 inches high. Not noticed in neighborhood.

SOLANACEAE

Solanum dulcamara. Bittersweet, Nightshade. Small plants, flowering in 1905.

Solanum tuberosum. Potato. Plants 14 inches high.

Lycopersicum esculentum. Tomato. Plants 1 foot high.

Petunia nyctaginiflora. Petunia. Plants 14 inches high. Common in gardens of the neighborhood.

CHENOPODIACEAE

Chenopodium album. Pigweed. Many flowering plants, one 7 feet high.

Chenopodium hybridum. Maple-leaved Goosefoot. Flowering plants 2 feet high.

AMARANTHACEAE

Amaranthus retroflexus. Amarantha Pigweed. Flowering plants 2 feet high.

PLANTAGINACEAE

Plantago major. Plantain. Flowering plants.

VERBENACEAE

Verbena urticifolia. White Vervain. Flowering plants 3 feet high. Not noticed in neighborhood.

POLYGONACEAE

Polygonum aviculare. Knotgrass. Flowering plants.

Rumex obtusifolius. Bitter Dock. Plants, not in flower.

Rumex acetosella. Field Sorrel. Plants, not in flower.

URTICACEAE

Ulmus americana. American Elm. Plants 1 foot high.

Ficus carica. Fig. Many plants, one 14 inches high. Appears to be a remarkable growth from fruit thrown into the cellar.

BETULACEAE

Betula alba (?) White Birch. Plant 14 inches high. Forms of the White Birch grow in neighboring yards and gardens.

SALICACEAE

Salix discolor. Pussy Willow. Plants 1 foot high.

Salix (species). Plant 1 foot high.

Populus tremuloides. American Aspen. Plants 2 feet high. Not observed in the region.

Populus grandidentata. Large-toothed Aspen. Plant 14 inches high, leaves very large. Not observed in the neighborhood.

LILIACEAE

Asparagus officinalis. Asparagus. Many plants 1 foot high. Probably from church decorations.

JUNCACEAE

Juncus tenuis. Small Rush. Flowering Plant. Sometimes found in damp gardens in neighborhood.

Juncus (species). Bog Rush. Plants 1 foot high, not in flower.

CYPERACEAE

Carex muricata. Sedge. Flowering plant.

Carex mirabilis (?). Sedge. Flowering Plant.

Cyperacea (species). Sedge. Plant, not in flower.

GRAMINEAE

Phleum pratense. Timothy Grass. Flowering plants.

Agrostis alba vulgaris. Red-top. Flowering plants.

Muhlenbergia mexicana (?). Drop-seed Grass. Not in flower.

Muhlenbergia tenuiflora. Drop-seed Grass. Flowering plants.

Poa annua. Low Spear-Grass. Flowering plants.

Eragrostis pilosa. Tufted Eragrostis. Flowering plants.

Avena sativa. Oats. Flowering plants.

Panicum capillare. Old Witch Grass. Flowering plants, some 3 feet high.

Syntherisma sanguinale. Finger Grass. Flowering plants.

Ixophorus viridis. Green Foxtail Grass. Flowering plants.

Zea mays. Indian Corn. Plants 6 inches high.

Undetermined species of garden shrub. Seedling plant 3 inches high.

Representing 28 Families, 58 Genera, 75 Species.

TWO SUMMERS OF BOTANIZING IN NEWFOUND- LAND

M. L. FERNALD

(Continued from page 65.)

There was still plenty to do nearer home but Miss Priest had collected Thrift, *Statice labradorica*, at Sandy Cove and Long was anxious to add that to his already extended list of "seen-for-the-first-timers." When we passed the hospital Miss Meister had not yet started, so we detailed Dunbar to help carry her bags as far as our roads coincided and Long and I headed for Sandy Cove, vowing to keep our eyes shut

to anything which might tempt us from the path. It was "a clever mornin'," so clear that the red cliffs of southern Labrador stood out sharply across the Straits and, although ten or twelve miles away, their strata showed with diagrammatic sharpness. The roadside swales and peaty barrens were a brilliant patchwork of color: great white, cottony clumps of *Salix candida* Flügge; acre upon acre of the superb blue-violet flowers of *Iris setosa* var. *canadensis* Foster, with here and there clumps of intenser color and some almost white; Butterwort, *Pinguicula vulgaris* L., so like a violet in superficial appearance as constantly to deceive us; the three Primroses, the lilac *Primula farinosa* in many forms, the pink or white *P. mistassinica* Michx. and the smaller white *P. egalikensis*; pink or crimson racemes of *Pyrola asarifolia* var. *incarnata* (Fisch.) Fern.; white flowering and bright-red fruiting racemes of Bog Asphodel, *Tofieldia glutinosa* (Michx.) Pers., and greenish-white spikes of the tiny *T. minima* (Hill) Druce; uncounted thousands, perhaps millions of deliciously fragrant milk-white wands of "Scent Bottle", *Habenaria dilatata*¹; more delicate aromatic racemes of "Hyacinth," *Smilacina trifolia* (L.) Desf.; great gardens of trim *Anemone parviflora* Michx., with lustrous and handsome foliage and really large, rather than small, widely spreading white sepals tinged outside with blue. These and many others which had not lost their charm crowded the sides of the road but, having collected them, we were able to keep to the straight and peaty path toward Sandy Cove.

But when, slightly before we reached Savage Cove, a few triangular fronds of a wonderfully delicate fern attracted our attention in the roadside thicket, the temptation was too much for us. I had already grown familiar with but not hardened to *Cystopteris montana* (Lam.) Bernh. in the Shickshocks, but it is not a fern to neglect, and Long had never seen it; besides, it was new to Newfoundland. So we were soon botanizing the openings in the spruce thicket near Savage Cove, fascinating springy and mossy glades full of the *Cystopteris*, the moss-like *Selaginella selaginoides* (L.) Link, the flexuous black-topped *Carex atratiformis* Britton, *Listera convallarioides* (Sw.) Nutt. with watery-amber racemes and *Salix vestita* Pursh, one of the most beautiful of willows, with deeply rugose rounded leaves dark green above but white beneath with a dense silk.

¹ One girl, when asked the name of this deliciously fragrant orchid, replied: "We calls it 'Scent Bottle' and some folks calls it 'Smell Bottle,' but that ain't the right name; the right name's 'Water Lilies'."

After repeatedly tearing ourselves away from such spots, which must wait until next time, we reached Sandy Cove and we knew at once where *Statice* grew, for east of the village there rose a bare ridge of whitish limestone pavement and gravel; and we made directly for it. At the foot we stopped for *Taraxacum ceratophorum* (Ledeb.) DC., new to our series of Newfoundland species. In the border of a little pool *Carex bicolor* All. was growing, very scarce but certainly it, a European species for which we had but a single American station (on Ingornachoix Bay). Through the prostrate mats of "Soapberry," *Shepherdia canadensis*, "Blackberry," *Empetrum nigrum* L., and Fly Honeysuckle, *Lonicera villosa*, and the various arctic willows, scattered plants of *Habenaria viridis* were projecting, short "chunky" little plants with large green or greenish purple flowers, the plant which Miss Priest had added to the known flora of North America. When we had satisfied ourselves with the lower slope and the shore and had reached the upper level of the barren it was 5 o'clock, and we were due at supper at Parson Richards's at 6:30. Long and I had been reinforced by Dunbar after he had violated Straits custom by helping a woman carry a heavy load.

On the Straits the men are inclined to hold to the archaic notion of women and they seem mildly surprised and perplexed when a "Grenfell girl" from the outside intimates that, instead of walking empty-handed while "the woman" lugs the load, they should change the programme. It is not unusual to see a young blade loafing about the kitchen with his pipe in his mouth, while the young girl who has promised to be or who has already become "his woman" uncomplainingly tugs in two pails of water at a time from the distant spring, brings in the coal and the wood, tends the cows and the garden-patch and, of course, does the housework. Perhaps the women of the Straits, who also work outdoors at the fisheries and are a hardy and healthy type, would resent any modernization of ideas, but the "Grenfell girls" and the doctors are setting them a new example.

It was 5 o'clock and we were due at Flower Cove at 6:30; but we had to collect some *Statice* and the turfey slopes about the little rock-crests were brilliantly rosy-purple with *Hedysarum alpinum* L., *Epilobium latifolium* L. and an *Oxytropis*. It took time to dig and clean these but at 5:45 we quit, wondering whether we could possibly cover the four miles of ledgy and peaty path and have time to get out of our seal-skin Straits boots (made after the Esquimaux or "Huskimaw")

fashion) and flannel shirts and be dressed to go out to tea in forty-five minutes. But Long called a halt! From the deep crevices at the crest he was extracting a strange Crucifer and Parson and Mrs. Richards would have to forgive our tardiness—for any species of the arctic genus *Braya* in this latitude is rare; in fact, we knew of only one species and this was something entirely distinct.

It was a great supper: delicious soup, lobster, hot rolls, delicate vegetables, cakes and preserves, and Mrs. Richards most tactfully hid her surprise at our ravenous appetites; but we were getting real "home food." The ordinary fare of the Newfoundland fisherman is calculated for a hardy race; but we were fresh from indoor and inactive city life and had found the great helpings of dough-balls, salt pork, boiled bones, leathery cabbage and dried peas a little overwhelming—plenty of calories but pretty hard on untrained digestions. To be sure, the people of the Straits, through the efforts of the Grenfell Mission, have learned to value lettuce and greens and Mrs. Whalen makes the most delicious of whole-wheat bread; and, as one of the big traders who supplies these ports told me, "the folks at Flower Cove are the most extravagant in the colony. They ain't willin' to live like their grandfathers. Why, we sell them more prunes and dried apricots and other luxuries like that than anywhere else in the colony." But the Newfoundland fisherman's dinner on Sunday, the day of puritanic inactivity (like that of week-days only more of it, with an ultimate plum pudding or currant duff) seems calculated to distend the stomach for the whole of the coming week¹; and when, late in August, we left the island, we agreed that we should never again dare look a cabbage or a pig directly in the eye!

The signal at Point Amour, across the Straits, had sounded and everyone from Eddies Cove to Deadman's Cove knew that the "Glencoe," returning from Battle Harbor, had passed Forteau; so, when she appeared at the entrance to the harbor we were all ready to be taken out by the small boat to board her. Capt. Norman used to bring the "Home" up the narrow channel, with barely room to turn, to the wharf; but Capt. Blanford, substituting with the much larger

¹ Changes come slowly in this region. The late A. S. Packard, landing on the opposite shore in 1860, wrote: "Accepting our hostess's kind invitation to take dinner, we sat down to a characteristic Labrador midday meal of dough balls swimming in a deep pot of grease with lumps of salt pork, without even potatoes or any dessert; nor did there seem to be any fresh fish. The staples are bread and salt pork; the luxuries game and fish; the delicacies an occasional mess of potatoes, brought down the St. Lawrence once a year in Fortin's trading schooner."—Packard, *The Labrador Coast*, 75 (1891).

and finer "Glencoe" (with a complement of 30-40 officers and men) was cautious and refused to risk the passage. We did not wish to leave the Straits but, naturally, we could not dodge the plain fact that we had come to Newfoundland to botanize about Trepassey at the opposite corner of the island, fully 350 miles to the southeast.

We left Flower Cove in the afternoon but a heavy wind was blowing and one of the officers informed us that the "Glencoe" "hadn't had a civil day the whole trip," and, when we put into the sheltered harbor of St. Barbe, it was decided to tie up at the wharf there, hoping the wind would go down with the sun. So, promptly after supper, while some of the officers went trouting up one of the brooks, we started a botanical reconnaissance of St. Barbe Bay. There were only three or four hours of daylight, but they were enough for us to pick up a few things we had not been seeing: *Poa trivialis* L., here, as elsewhere in Newfoundland, native of spring-heads and rills, *Botrychium virginianum* var. *laurentianum* Butters, with heavier and coarser sterile fronds than ours, and *Osmorhiza obtusa* (C. & R.) Fern., which Miss Priest had collected at Flower Cove; and we extended slightly southward the ranges of a few species.

Shortly before daylight we roused slightly as the "Glencoe" left St. Barbe and almost before we were asleep again we were wide awake, puzzled by the grinding noise under our stateroom and a terrific list from which the ship did not recover. It took no time to get on deck and to see that the splendid "Glencoe" was hard aground on a submerged ledge near the Dog Peninsula or "Dog Pen"; and those who knew that we had begun our trip with a train-wreck were inclined to look upon us as hoodoos. We did not confide to them, that our consciences still whispered that we were being further punished for abandoning southeastern for northwestern Newfoundland. All attempts to drag the steamer off by means of anchors and cables set at various angles proved futile, and toward night, as a gale was springing up with a prospect of seriously racking the "Glencoe," all passengers were taken in life-boats to the nearest settlement, Brig Bay. It is no small matter for a fishing community of half a dozen families to house thirty-five or forty half-ship-wrecked people suddenly thrust upon them, especially since, as they all said on this coast, "there are no fish; so what's the use of going out for them?" But they rose to the situation and tucked us all away and they had at least plenty of bread and butter and tea. On this diet we had less "pep" than if we had

been able to get some fresh fish or even some smoked caplin (the dog's food in winter); but we had an interest which kept us fully occupied and, since we hoped never again to be marooned at Brig Bay (after the first night we called it Bug Bay), we seized the opportunity to collect every plant of interest there and we ate every wild berry within a radius of a mile.

On the upper border of the beach, in dry limestone-shingle, there was a strange grass, in habit like *Poa alpina* L., but more densely tufted and with tiny panicles, the European *P. alpina* var. *frigida* (Gaudin) Reichenb. On the limy rock-barrens and in the adjacent swamps we were able to extend southward the ranges of several species, including *Carex microglochis* and *Gentiana propinqua*; and we here established new northern limits for *Carex sterilis* Willd., *C. Hostiana* var. *laurentiana* Fern. & Wieg., *Parnassia parviflora* DC., *Scutellaria epilobiiifolia* Ar. Hamilt. and *Antennaria straminea* Fern. The two "Plum-boys," *Rubus arcticus* and *R. acaulis*, were both fruiting and we were much interested in making a comparison of the two, the former with coarse drupelets and large stones, the latter with more numerous and smaller drupelets and stones and a rich flavor, superior to that of any of our other raspberries. *Arenaria cylindrocarpa* Fern. was in the mixed clay and limestone gravel, creeping extensively among the stones and throwing up at irregular intervals moss-like tufts of short leafy branchlets with terminal olive-brown capsules; and most of the more generally distributed specialties of northwestern Newfoundland abounded: *Carex glacialis*, *Salix reticulata* and *vestita*, *Betula microphylla* Bunge, *Comandra Richardsiana* Fern., *Draba incana* L., *Epilobium glandulosum* Lehm.; and *Gentiana nesophila*, the largest plants we have ever seen, 2.3 dm. high, with flowers 5 cm. long, likewise the tiniest, 2 cm. high, with fully mature flowers only 1.2 cm. long, a range of variation which defies the maker of an artificial key.

So we kept fully occupied until Thursday evening when, at about 6 o'clock, the "Prospero" arrived from the northeast side of the island, quickly pulled the "Glencoe" off the ledge and as quickly steamed away; and when we saw our steamer again afloat and anchored off Plum Point, we stranded passengers chartered the motor-boats of Brig Bay and promptly returned to the "Glencoe." The crew were not really ready for us and we immediately transferred much of the fresh paint from the retouched railings to our overcoats, but that was a minor matter compared with being back again on board and it did not

greatly disturb us that Capt. Blanford decided to tie up for the night at Plum Point. And next day, when the wind increased, Long, Dunbar and I spent our time ashore, searching the neighborhood of Plum Point for further specialties. The wind kept up all night and, since three of the four compartments of the steamer were full of water, we lingered on and the young people of all the neighboring settlements from Derby's Tickle to Bird Cove gathered for a dance on deck.

Toward morning the water became "civil" and we steamed slowly but steadily on to spend the next night tied up to the wharf at Port Saunders. When we went ashore after supper we started over the road toward Pointe Riche, where Wiegand had collected some good calciphiles in 1910. Naturally, we did not expect to get any novelties on an evening stroll over the route he had formerly covered by daylight, but the charm of the open country, the sand-dunes with a northern colony of *Ammophila breviligulata* Fern. and other dune types, the turfy and rocky limestone barrens, and the great river-like spring breaking abruptly out of the rock-terrace at Sandy Cove will never be forgotten. We made the personal acquaintance of *Tanacetum huronense* var. *terrae-novae*, with whitish feathery foliage and large solitary or paired golden buttons. At the big spring was an extensive colony of *Taraxacum latilobum* DC., an endemic species of Newfoundland originally collected by La Pylaie, perhaps at this very spot, which he must have passed in 1820 when he botanized from Port Saunders to Pointe Riche. And we extended southward the Newfoundland range of *Gentiana propinqua*, extended northward the range of *Euphrasia americana* Wettst. and brought in from a bit of boggy woods a collection of the Asiatic *Epilobium palustre* var. *mandjuricum* Hausskn., a plant not recorded from America.

When we reached Curling on August 11, our little diversion "over just one trip" had occupied twenty days, and when we reached St. John's at midnight of Wednesday, the 13th, we were nearly four weeks late. The train for Trepassey would not leave until Friday noon, so, after a rainy morning, we spent Thursday afternoon climbing the slopes of South Hill. I had been there with Wiegand in 1911, but Long and Dunbar had not, and I was quite willing to linger with them over the "Sweet Hurts" (Blueberries, *Vaccinium pensylvanicum*) "Ground Hurts" (*V. uliginosum*) and "English Blackberries" (*Rubus canadensis*) which we had missed on the Straits; and particularly over

the Atlantic European specialties. *Pedicularis sylvatica* L., with small fern-like foliage and little racemes of exquisite shell-pink large corollas, and *Potentilla procumbens* Sibth., resembling our *P. pumila* Poir., but coarser and with very heavy and deep roots, abounded in the peat and rock along the hillside rills; the coarse *Pedicularis palustris* L., with long spike-like wands of rosy-pink and deep violet flowers, filled many boggy or springy swales along Waterford River. The Heath Grass, *Sieglingia decumbens* (L.) Bernh., remotely suggesting *Danthonia*, formed dense tussocks along with the delicate *Agrostis canina*. The unique *Juncus bulbosus*, related to our coastal plain *J. militaris* Bigel., but delicate and sprawling, bordered spring-pools, the inflorescences often proliferous and bearing long plumes of foliage. And in spruce thickets at the top of the hill, as in the boggy swales along Waterford River and in spruce woods northward toward Torbay, where Wiegand and I got it in 1911, were closely repent carpets of a *Veronica*, in foliage suggesting *Linnaea borealis*, but related to *V. officinalis*, with more delicate racemes of blue-violet, rather than lilac flowers. This plant, although characteristic of mossy swales and spruce woods of the Avalon Peninsula and collected by Wiegand and me in 1911, and also indigenous in woodlands and recent clearings on Prince Edward Island, has not heretofore been recognized as an American. It is identical with specimens from Scotland, Ireland and Wales but unlike most material of *V. officinalis* from continental Europe. Its exact identity is still to be worked out.

In our limited time I was unable to take Long and Dunbar to some of the other Atlantic European plants which are also indigenous in southeastern Newfoundland, such as Mat Grass, *Nardus stricta*, and *Ranunculus hederaceus* and *R. Flammula*; and, except, for the few species above noted, the flora of South Hill was meagre and uninteresting. The city of St. John's, likewise, is not very alluring to the stranger whose interest is not fishy, thoroughly a sea-faring town, with squalor, long rows of unpainted or only anciently painted houses, pervading odors of fish, cod-oil, seal-oil and the other maritime smells, and such hotel facilities as do not tempt the fastidious stranger to linger; so that we were glad when it was time for the train to start on Friday noon for Trepassey.

From the car-windows we were able to distinguish *Pedicularis palustris* and *P. sylvatica* and to extend their known ranges southward at least to Petty Harbor; and we were fascinated by the big bare hills

which guard the entrance to Bay Bulls. From time to time we "spotted" areas which certainly need investigation, such, for instance, as the stretch of shallow ponds and lakes south of Tor's Cove, and again in the area between milepost 34 and Caplin Bay, where we clearly saw the southern *Juncus militaris*, a species preëminently characteristic of Nova Scotia, Cape Cod, Long Island and the New Jersey Pine Barrens; and, since many of the coastal plain plants (including *Juncus militaris*) which are found on the barrens of the Exploits or about Notre Dame Bay, had never been known from the Avalon Peninsula, we naturally longed for a day in each of these areas. And as we passed Caplin Bay, Ferryland and Renew's, all reputed localities for *Calluna vulgaris*, we strained our eyes in trying to detect the Heather.

The soil was right, the highly silicious Avalonian rock, hopelessly barren and desolate, with great stretches of "haith" or "mesh," but from the train we saw only the most uninteresting of plants, which are dominant on sterile areas of many sections of northeastern America: Cinnamon Fern, *Osmunda cinnamomea* L., Pasture Juniper, *Juniperus communis* var. *montana* Ait., White Top, *Danthonia spicata* (L.) Beauv., Rusty Cotton Grass, *Eriophorum virginicum* L., Hoary Willow, *Salix humilis* Marsh., Sweet Gale, *Myrica Gale* L., White Cinquefoil, *Potentilla tridentata* Ait., Fire Cherry, *Prunus pensylvanica* L. f., Indian Tea, *Ledum groenlandicum* Oeder, Lambkill, *Kalmia angustifolia* L., and the ubiquitous *Solidago uniligulata* (DC.) Porter and *Aster radula* Ait. After we had vainly tried for three hours to force enthusiasm over these and other sure indicators of soil-sterility, someone in the seat behind me remarked, "I vote for the Straits Coast," to which came the unparliamentary but sincere response, "I second the motion." And, when we had passed Cappa-hayden and the Red Hills and turned westward across the Rocky Moor, the anticlimax after coming from the half-hourly botanical thrills of the Straits was still more depressing; miles and miles of hopelessly barren rock-pasture, with no plants in sight more exciting than *Potentilla tridentata*, *Agrostis hyemalis* (Walt.) BSP. and *Empetrum nigrum*, and with signs of animal occupation only when a flock of beautiful brown and white Willow Ptarmigan swiftly flew away from the passing train. Dunbar, whose home is in Hancock County, Maine, where we supposed there were boulders enough, expressed the thoughts of all three of us by remarking, "The more we turn westward

toward home the farther away we seem to get!" while a Newfoundlander on the train explained to me that this is the "abomination of desolation" referred to by the prophet Daniel.

Toward twilight, after passing Portugal Cove, we came out on the shore of Biscay Bay and in a few minutes reached Trepassey, at the head of Trepassey Bay. Following the good advice of the conductor on the train we found a comfortable home with Mrs. Isaac Curtis and, after a late supper, retired with the words of Cormack's century-old label of *Calluna vulgaris* vividly in mind: "Trepassey Bay also very abundant, S.E. of Newfoundland, considerable tracts of it."

Next morning we were out bright and early and were surprised to see what an apparently prosperous town we were in; but our interest being in the rocky, gravelly and peaty barrens which stretch north and east from Trepassey Bay, we got away as promptly as possible from the settlement. During a very long day we worked across the barrens eastward to Biscay Bay and it was 10 in the evening when we got in. Nowhere had we seen *Calluna*, though "Blackberry," *Empetrum nigrum*, in some of its forms had repeatedly deceived us; and, when we told Mrs. Curtis and others of our disappointment, they were in no way surprised, for the people of Trepassey are mostly of Irish or Scotch extraction, many of them very intelligent, and they had never seen nor heard of Heather outside the "old country." In fact, the station agent, who proved to be a widely read man, assured us that in his Newfoundland travels Cormack had never been within many miles of Trepassey and any statement he had made about the region must have been based on hearsay.

Nevertheless, Trepassey has some interesting plants. At gravelly brooksides, in peaty and rocky barrens and around spring-heads with *Stellaria uliginosa* Murr., *Ranunculus reptans* L. and other such plants, was a very characteristic *Galium*, quite strange to us, but upon study proving to be the Heath Bedstraw, *G. saxatile* L. of western Europe, where, just as at Trepassey, it grows "On barren heaths and commons, and in upland pastures, borders of woods, and on rocks."¹ The European *Juncus bulbosus* abounded in some of the pools, European *Glyceria fluitans* was in the swales, and near Portugal Cove we got immature or sterile *Potamogeton polygonifolius*, a European species already well known from the region west of St. John's. Otherwise the indigenous flora of the barrens about Trepassey was made

¹ Engl. Bot. ed. Syme, iv. 219 (1873).

up of the species which probably occur through the whole breadth of southern Newfoundland from Cape Ray to Cape Race, including such typical coastal plain plants as *Schizaea pusilla*, *Lycopodium inundatum* var. *Bigelovii*, *Carex trisperma* var. *Billingsii* Knight, *Habenaria blephariglottis*, *Amelanchier stolonifera* Wiegand, *Rubus recurvicaulis* Blanchard ("English Blackberry"), *Gaylussacia dumosa* var. *Bigeloviana* Fern., and *Bartonia paniculata* var. *iodandra* (Robinson) Fern. *Carex umbellata* Schkuhr, which grew in silicious gravel, we had previously had only from central Newfoundland, and a little species of "Good-bye-Summer," with short elliptic or oval leaves, seemed strange to us, a plant afterward found all the way to Cape Ray, the endemic *Epilobium Pylaeianum* Fern. And a common weed of the hayfields, along with French Sorrel, *Rumex Acetosa* L., was the Cow Parsnip of Europe, *Heracleum Sphondylium* L., here called "Wild Parsnip," and considered a vile nuisance because of the rank flavor it imparts to the milk. As a matter of fact the plant, closely related to the indigenous *H. lanatum* Michx., might be made a boon to the region in spring and early summer when first sprouting. The new stems and leaf-stalks of the American species, boiled in salted water, are a good substitute for stewed celery and the European species is probably quite as good. Here is the verdict of Boswell Syme: "The young shoots and leaves may be boiled and eaten as a green vegetable, and when just sprouting from the ground resemble asparagus in flavour. This experiment is, however, seldom tried, owing to the ignorance of those to whom such an addition to the table would be a benefit and luxury."¹

After our extremely long Saturday we were slow to get up on Sunday, particularly as it rained and we had all contracted "devil's grip," a particularly debilitating infection which was running through the region. We were, consequently, not specially enthusiastic about putting up the extensive collections of the day before, but by night they were all in press. As we planned to go from St. John's to Bonaventure to search for Cormack's *Arbutus Unedo*, it was necessary for us to return to St. John's from Trepassey on Monday morning. But during the trip back our physical condition and our experience of Saturday with one of Cormack's records influenced us to modify the plan. We knew that the rocky hills at Bay Bulls looked interesting, there was a well recommended small hotel there and the trip to Bona-

¹ Engl. Bot. ed. Syme, iv. 155 (1873).

venture and back would kill nearly a week, so we decided to stop off at Bay Bulls, at least to see what the region was like.

Mrs. Williams's little hotel proved to be what we had not seen since Mrs. Billard's at Port aux Basques, a comfortable place with juicy roasts, plenty of vegetables and good milk and, in our weakened condition, we settled right down and promptly dismissed Bonaventure from the programme. The region was of the hopelessly sterile silicious Avalonian rock, as elsewhere from St. John's to Cape Race and Trepassey, and the flora was not specially different. Several of the Atlantic European plants which we had seen on South Hill but not at Trepassey were here: *Sieglingia decumbens*, *Agrostis canina*, *Carex leporina* L., *C. Oederi* Retz. and the little variety of *Veronica officinalis*; and in the turf on the high hill¹ at the northern entrance to the harbor the American *Carex umbellata* and *C. novae-angliae* Schwein., both very rare in Newfoundland, grew with *Sieglingia*; while in boggy swales the European Manna Grass, *Glyceria fluitans*, and typical European *Carex muricata* L. (*C. stellulata* Good.)² abounded with *Epilobium nesophilum* Fern., endemic to Newfoundland and the Magdalen Islands. But on the whole the region was a disappointment and we again went through our formula: "I vote for the Straits Coast," followed by "I second the motion!"

It was now time to start home and, since we were all averse to the tedious and, as we knew from experience, dangerous return across the island by rail, we decided to go by steamer from Argentia along the south shore of the island to Port aux Basques and, incidentally, to see a new strip of coast. The "Portia" would not sail until Tuesday so, rather than wait over in St. John's, we went Sunday afternoon, August 24, to Whitbourne, there to await the boat-train of Tuesday. Whitbourne is an old botanical center; Robinson and Schreck collecting there in 1894, Wiegand and I in 1911 and Williamson in 1912. Consequently, we expected to get nothing new but we should at least be in the open country. Our expectations were in the main fulfilled, but our time at Whitbourne was interestingly occupied in botanizing two of the sand-bottomed ponds, where we collected again the specialties of the region: *Thelypteris palustris* Schmidel, *Isoetes Tuckermanni*

¹ On our labels we called this Joan Plains Hill, the nearest name we could hit upon from the pronunciation. When we inquired the name of the hill and finally asked the spelling we received the cryptic reply: "'How do you spell it?' My land! Here I've lived in Bay Bulls thirty-five years and I never heard a question like that. 'How do you spell it?' My land!"

² See Mackenzie, Bull. Torr. Bot. Cl. 1. 346 (1923).

A. Br., *Sparganium americanum* Nutt., *Sagittaria graminea* Michx., *Elatine minima* (Nutt.) Fisch. & Meyer, *Sium suave* Walt. and *Gratiola aurea* Muhl., all common enough northeastward to Nova Scotia but rare in Newfoundland. But our chief interest was in securing an abundance of heavily fruiting *Littorella americana* Fern., a very rare species which is little known in fruit. Wiegand and I got good flowering material in 1911 but in 1924 the plant formed a close and often continuous fruiting turf along one margin of Goose Pond and we amused ourselves cutting thin sections of the turf and fingering out the fine gravel from the sod; but even now, nearly two years later, bits of gravel still rattle out in the herbarium.

The "Portia" was due to sail from Argentia Tuesday, but when we got there she was still loading, so we put in the afternoon exploring the sandy flats and brackish pools, not too far away from the wharf. There we got *Salicornia europaea* var. *prostrata* (Pall.) Fern., which we had known in Newfoundland only from Bay St. George; and, best of all, there were *Suaeda Richii* Fern., a characteristic species of eastern New England and adjacent Nova Scotia but not previously found in Newfoundland, and the more widely dispersed *Tillaea aquatica* L., also new to the island.

When we got back to supper a gale was blowing and the "Portia" was destined to stay at the dock overnight. In the morning, Long and I attempted further explorations but were nearly blown over a headland and returned, constantly fighting the wind, to spend the rest of the day working over our presses and watching the loading of a freight-car with silver ore from the mine at Argentia, now starting to the smelter at Swansea in Wales. We were riding out the tropical hurricane which, we afterward learned, had been destroying shipping, houses and trees all the way from the South Atlantic States to southern Newfoundland and, after passing through a train-wreck and the grounding of a steamer, we had no wish for the *tertium quid*, so we approved the wisdom of the captain in taking no chances. By night the wind had quieted and we put across Placentia Bay. It was a clear and brilliant evening, the "Portia" confidently took the magnificent swell and all hands gathered on deck to watch the breakers dash, often more than one hundred feet, over the cliffs; but finally the deck grew too wet and everyone disappeared inside. Long and Dunbar sought our stateroom, but I was content to stop at the first lounge in the upper cabin; there was more air and the deck-rail was conveniently near.

By morning we were at Burin and during the day, as we passed between Lamaline and the French islands of St. Pierre et Miquelon and entered Fortune Bay, our minds were constantly on Bachelot de la Pylaie, who more than a century ago lived at St. Pierre and botanized this coast and the hills back of it, and we naturally wondered again and again where he had found *Calluna* and just which of "les points culminans produisent . . . le *Hudsonia ericoides*." But we got no chance to investigate; the "Portia" attended strictly to business and made only the shortest of stops at small ports where botanizing might be possible, but tied up for hours at the large towns, like Grand Bank, where botanizing was out of the question. At Harbor Breton the wharf was sufficiently near natural and unspoiled open country for us to make a dash, and we brought back from a fresh pool *Limosella aquatica* L., a characteristic plant of Europe and western America but in eastern America heretofore known only from the southeastern corner of the Labrador Peninsula.¹ The great rock walls about Gaultois, Rencontre, Francois, La Poile and Rose Blanche were fascinating, and we yearned to get ashore long enough to give them a full examination; and, in the region back of Burgeo great white sandy hills attained almost montane height and a sportsman who came aboard told us that these sandhills extend many miles into the interior. It consequently required but little exercise of the imagination to picture La Pylaie and perhaps Despreaux and other companions crossing over from St. Pierre and here ascending "les points culminans" on carpets of *Calluna*, *Corema* and *Hudsonia*, and in the wetter spots gathering *Carex remota*, *Juncus acutiflorus* and *J. scirpoides*, the sight of any of which would thrill the modern student of the Newfoundland flora. But we had to be content merely with snatching a few species at each landing, mostly the ordinary types of any granitic region from Maine to Labrador; and, when we reached Port aux Basques on Sunday in time for the "Kyle" homeward bound, we had seen enough of southeastern and southern Newfoundland so that, when one of us feelingly remarked, "I vote for the Straits Coast," the others as feelingly responded, "We second the motion!"

(To be continued.)

¹ See Fernald, RHODORA, XX. 160 (1918).

ERUCASTRUM POLLICHII IN MAINE.—In RHODORA, xxvi. 22-23 (1914), Dr. S. F. Blake gives several references to the finding of *Erucastrum Pollichii* Schimp. & Spenn. Apparently it has not been reported from Maine. Last summer on the 11th of July, I found two or three plants of this species growing very luxuriantly at Rockland in that State. They were on the wharf from which the Mount Desert boat starts, at the end of freight branch of the railroad. *Brassica*, *Sisymbrium*, and other yellow-flowered weeds give a sunshine effect all about this locality. On examining the Herbarium of the New England Botanical Club, I find no specimens of the *Erucastrum* from Maine.—NATHANIEL T. KIDDER, Milton, Massachusetts.

THREE PLANTS OF PLYMOUTH, MASSACHUSETTS.—The writer spent the week-end of September 12th, this year collecting in the inland parts of Plymouth, Massachusetts, about numerous sandy ponds. The water-level was very low, many of the smaller ponds having completely dried up. This condition of drought had caused a marked change in the flora, from previous seasons.

Three plants as determined by Professor Fernald happen to be of particular interest: of these, *Eupatorium leucolepis* T. & G., and *Scirpus debilis* Pursh, var. *Williamsii* Fernald are both rare and local in eastern Massachusetts, while *Psilocarya nitens* (Vahl) Wood has not hitherto been reported from New England.—LYMAN B. SMITH, Winchester, Massachusetts.

The date of the April issue (unpublished as this goes to press) will be announced later.

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